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From Traditional Lessons Learned To Appreciative Lessons Learned - A Case Study at Ericsson

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Abstract

People in a software development organization can learn valuable lessons from their own experiences and from the experiences of others in the organization through lessons learned workshops. Such workshops are not conducted regularly and adequately across organizations due to their problem oriented focus and the barriers for conducting them. So, an alternative method with a strength based focus, called 4ALL method is developed in the Swedish telecom company, Ericsson. The method is based on the appreciative inquiry approach, an approach that engages individuals within an organization in its revamp, change and focused performance by seeking the positive core of a development process. In this thesis, an investigation about the 4ALL method is carried out in order to study the fundamentals, goals and organizational benefits of the method. Further, a research about the various possible means of diffusion of the method is carried out and presented. The results of this research show that, 4ALL method, only applied to a smaller extent, has increased the identification and management of positive and negative experiences by supporting a balance between them and by addressing the barriers for conducting lessons learned workshops. This research further shows that the method has eventually contributed towards the improvement of lessons learned practices and organizational learning thereby paving the way for organizational commitment and improved team and individual performances. In addition, the research has resulted in identifying various means of diffusion of the 4ALL method, such as, 'frequent 4ALL workshops' and '4ALL handbook'.

Keywords: Post Mortem Evaluation, Appreciative Inquiry, Lessons Learned, Software Process Improvement, 4ALL Method

1 Introduction

Software Process Improvement signifies the changes implemented in a software process with the intent of realizing improvements in software product quality, increasing productivity and reducing the duration of the cycle of product development. SPI can be realized through many practices, including, lessons learned workshops (LL workshops) or Post Mortem Evaluations (PMEs). In today's dynamic business environment, it is really essential to systematically look for innovation opportunities. Such a search can be realized when, right roles and processes are established, clear goals and relevant measures are set, and progress is reviewed frequently, for e.g. using LL workshops.

In the field of software engineering, a PME or Post Mortem Analysis is a traditional and an empirical study method used for learning lessons from projects to benefit on-going and future projects. A PME is a systematic, formalized review of the quality of a product and the relevant processes that resulted in the product [1]. When a PME is conducted with the right intent, it can enable individual learning to be transformed into team and organizational learning process. However, a PME with a problem oriented focus can turn into a negative experience for the individuals who participate in the evaluation. So, PMEs with a focus on learning from failures can result in an environment wherein people who need to take part in such evaluations are unwilling to do so. This will eventually hinder organizational learning which plays a vital role in the development of any organization.

Reflective reviews and exploitation of small, positive and negative opportunities or retrospection of strengths and failures, in addition to innovation can bring about new paradigms [1]. So, an alternative approach to a PME is that people who participate in a LL workshop can learn from things that went right as well as from those that went wrong, so that, the workshop can become a really useful tool directed towards the development of an organization. Such an approach is an appreciative inquiry approach with a strength based focus, encouraging workshop participants to learn not only from negative experiences but from positive experiences as well.

According to Cooperrider D.L. and Whitney D, '*Appreciative inquiry is about a coevolutionary search for the best in people, their organizations and the relevant world around them. In appreciative inquiry, the task of intervention paves the way for imagination and innovation, and instead of negation, criticism, and spiraling diagnosis, there is discovery, dream, and design*' [2].

Fundamentally, appreciative inquiry seeks towards building a constructive union between individuals and their past and present abilities, such as, their strengths, achievements, innovations, unexplored potentials and lived values. Thus an appreciative inquiry approach, by seeking the positive core of a development process, enables individuals to recognize their potential and will enable them to deal with challenges. An aim at inquiring into human spirit and potential, to build a future which is better, can be realized when the positive core of a change process is made the common and explicit property of all individuals [2]. This research will focus on the LL workshops that are based and built on this understanding and conducted in an appreciative inquiry way. Ericsson has a significant tradition of conducting LL workshops but the workshops faced barriers as PMEs. Now, in order to avoid a LL workshop turning into a negative experience that hinders adequate learning and in order to address the barriers that are identified for conducting them [3], a *4ALL** i.e. an '*Appreciative Lessons Learned*' method to be used by all, has been developed. The *4ALL* method, an alternative approach for conducting PMEs or LL workshops has a strength based focus in an appreciative inquiry way. So far, the method has been applied in four project evaluation workshops and has been found to address the barriers for conducting PMEs and, strike a balance between positive and negative experiences or excellences

and challenges. So, the method is found to be an effective alternative method for PME or LL workshops and this will be investigated in this research to present the relevant reasons in terms of its fundamentals, goals and organizational benefits. In addition, the research will also focus on finding the various means of diffusion of the method.

The Research Questions (RQs) that are formulated based on the research background are,

RQ1: ‘Why is a strength based approach to lessons learned workshops, an effective alternative approach for PMEs in terms of organizational benefits?’

RQ2: ‘How can the strength based method i.e. 4ALL be diffused at Ericsson?’

This research paper is organized as follows: Section2 is a summary of the theoretical background of the research; Section3 is a description of the research methodology and data collection methods; Section4 is a presentation of the findings from the case study; Section5 presents a discussion of the findings and results; Section6 is conclusion of this research paper.

2 Theoretical Background

In this section, the theoretical background of the research is explicated and presented in 4 parts, as follows: PMEs and Appreciative Inquiry.

2.1 PMEs

A PME is a series of steps intended at examining the lessons to be learned by reviewing the quality of a product and the relevant factors that influenced the development of the product, such as, processes, resources, and collaboration [1]. The evaluation can either be conducted at major milestones or more commonly, after the completion of a project. A PME is frequently advocated for projects with many participants in large organizations without understanding and emphasizing the need for conducting post mortems in small and medium-sized companies as well [1]. The emphasis of a PME is primarily on the development process and the lessons learned and therefore, can serve many different purposes, as presented below.

PMEs can enable team members to recognize, remember, and document the lessons learned during a project. They help elicit and document tacit skills used by teams and developers thereby making lessons available to people who are involved in the enhancement of a development process [1]. A PME can make team members share and understand each other’s perspectives, integrate individual and team learning, illuminate hidden conflicts and even improve project cost estimation [12]. It can lead to knowledge transformation by explicating knowledge from a project completed by a team in a form that makes it available for the other teams. It can result in increased knowledge sharing within and across project groups. It can have side effects in terms of increased job satisfaction realized by giving people, a feedback about their work, and improved working relationships among participants [12]. PMEs ultimately result in knowledge creation through analyses of a project, for example, lessons learned and new risks, root causes and their effects, critical success factors, suggestions for improvements in on-going and future projects [1]. A PME can serve as a really useful tool that contributes to overall organizational learning, by enabling organizations to learn from their own experiences. A PME offers a simple yet effective way of uncovering achievements and improvement opportunities in an organization [12].

** All the statements that are presented about 4ALL method in this research paper are based on a document about 4ALL method and the interviews conducted during this research.*

When a team applies a PME in the right setting, it can be a worthy step towards continuous knowledge management and improvement activities. Thus, PMEs have many organizational benefits.

However, PMEs are not conducted regularly and adequately across organizations due to the barriers that are identified for conducting them [3]. A PME may be expensive to conduct as the evaluation calls for an investment of time, people and resources. But, the resources spent on such evaluations need to be looked upon as an opportunity to learn and not as a cost [13]. It is really vital to understand that the costs of not conducting a PME could be high, if mistakes are continuously repeated, leading to more project failures which in turn undermine the performance of an organization [13]. PMEs may turn into negative experiences that hinder organizational learning due to the barriers for conducting them [3]. The barriers, include, 'Getting lost in current business', 'Lack of mechanisms to encourage exploitation' and 'Insufficient integration with existing learning systems'. The barriers are categorized into three specific reasons, as 'Lack of emphasis on or lack of commitment to PMEs', 'Difficulties of acquiring and processing the information needed to conduct a PME' and 'Conditions for performing PMEs' [3]. Therefore, it becomes inevitable and vital to introduce and apply an alternative approach for conducting PMEs. One such approach is based on the principles of appreciative inquiry with a strength based focus aimed at addressing the barriers for conducting PMEs.

2.2 Appreciative Inquiry

Appreciative inquiry is a unique approach suited for managing change in human systems.

It fundamentally encompasses two acts, defined by Cooperrider D.L. and Whitney D, as presented below.

Ap-pre'ci-ate - *The act of recognizing the best in people or the world around us, affirming past and present strengths, successes, and potentials.* [2]

In-quire - *The act of exploration and discovery performed by asking questions and by being in an opened state of mind to see new potentials and possibilities.* [2]

It is a process of inquiry which supports that human systems tend to grow in the direction of persistent search in the form of inquiry and that the propensity is sustainable and stronger, when the means and ends of the inquiry process have a positive correlation [2]. It inquires into, identifies and further develops the strengths of organizations, teams and individuals in order to create a better future for a society [15]. A problem-solving view of the world can be a primary restraint on imagination, passion, and positive contribution. So, positive mood and hence positive emotions of a team member (for e.g. a project manager of a team) will have a significant influence on achieving work satisfaction of team members in a team involved in a development process [19].

Therefore, it is seen an approach which enables the identification of peak experiences ultimately leading to appreciation, imagination, determination and creation with the main focus on strengths, i.e. the area of positive traits [19]. A collaborative inquiry and a strategic vision, emphasized during the application of an appreciative inquiry process unleashes positive energy essential to attain a preferred and sustainable future in any organization. But an understanding that, an appreciative inquiry approach focuses only on strengths, is definitely misplaced, as it also enables in addressing weaknesses or failures or challenges.

The power of appreciative inquiry can be seen in the way it unleashes six freedoms, presented later in the paper, during a single cycle of a 5D model (*Definition, Discovery, Dream, Design and*

Destiny/Delivery) of an appreciative inquiry process (**Fig1**), the process model used to generate the power of appreciative inquiry. Due to this breadth of an impact, appreciative inquiry has a greater capacity of transforming personal and collective realities than many other organizational processes [18]. In appreciative inquiry, organizational learning is viewed as an ongoing process i.e. something that is vital and should be brought forward in all the phases of the cycle of the appreciative process [16].

- 1) Freedom to be Known in Relationship - People need to be known based on their identities instead of roles
- 2) Freedom to be Heard - People need to be heard of their experiences in a project
- 3) Freedom to Dream in Community - People in an organization need to be involved in the dreaming process to create an impetus for doing things better
- 4) Freedom to Choose to Contribute - Scope, success and satisfaction of contribution is directly related to the freedom to choose the nature and extent of contribution to appreciative inquiry initiatives

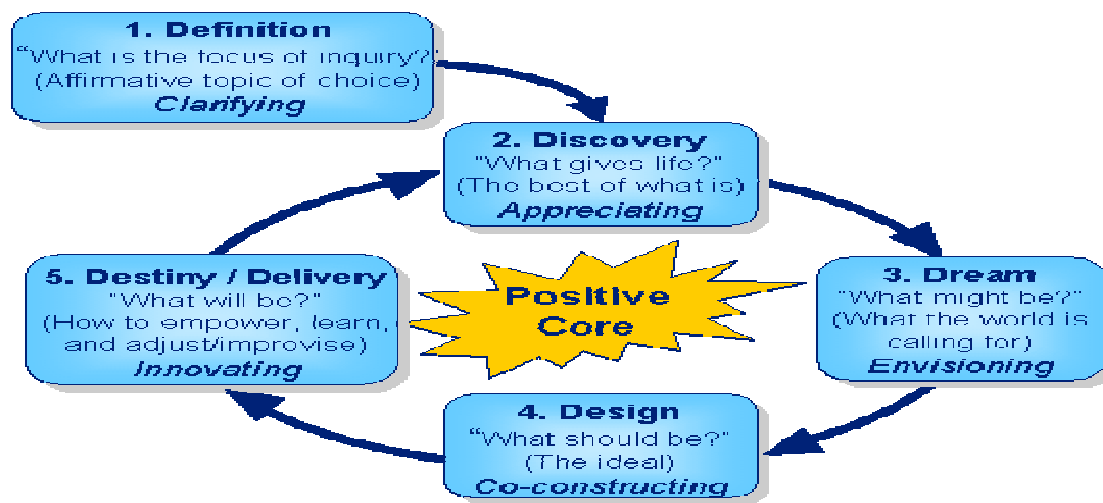


Fig1. Cycle of an Appreciative Inquiry Process [16]

- 5) Freedom to Act with Support - People are invited to act on behalf of the things that passionately inspire them - the things that they know will make a difference in their organization and in the world, with support from others at all levels of the organization
- 6) Freedom to be Positive - People need to be with a positive focus, so that, they can further improve their strengths and try to deal with failures as challenges

The organizational benefits of appreciative inquiry are presented below.

The features of appreciative inquiry make it a suitable and a plum approach in a wide range of contexts, including, *Project Management*, *Change Management*, *SPI* and *LL Workshops*. LL workshops conducted in an organization primarily aimed at solving problems will eventually result in a situation wherein the organization is viewed as a problem to be solved. But such workshops when conducted in an appreciative inquiry way will enable to view the organization as a solution to be embraced [1]. When a LL workshop is conducted in an appreciative inquiry way in an organization, each person involved in the success of the organization will be offered an opportunity to share his/her successes in a development process with a focus on the tasks that worked best for the person and the relevant reason(s). Such a workshop will pave the way for an environment wherein individuals can express their hopes and dreams for the better future of the organization apart from setting a positive and an energizing tone in the minds of the people to

deal with challenges [2]. Ultimately in practice, such workshops can enable teams to reach new levels of maturity thereby allowing the teams to move forward more quickly during changes in the organization or a business model with a direct and positive impact on the outcomes. Since an appreciative inquiry approach seeks the positive core of any process, it can transcend national and cultural boundaries with a better effectiveness across the different cultures.

3 The Ericsson Case: Background and Research Methodology

3.1 Background

Traditional LL workshops have served their purposes, may be not to a satisfactory extent due to the barriers for conducting them. This resulted in a situation wherein the participants are less interested and unwilling to participate in the workshops. The situation is also attributed to the lack of time for reflection, taking actions and learning lessons together with the time lag between decision, action and outcomes. So, using appreciative inquiry as an inspiration, an alternative and a strength based lessons learned method (LL method), known as *4ALL* was developed, which is a structured and a documented method. The method is based on the five original principles of appreciative inquiry, *positive principle* which implies that a positive thinking provides energy required for future changes, *anticipatory principle* which implies that a positive thinking about the future will lead to positive actions, *constructionist principle* which emphasizes that reality is constructed from the perceptions of multiple individuals, *principle of simultaneity* which implies that inquiry in itself affects a process, through making participants see the reality from alternative perspectives, and *poetic principle* which implies that organizations are viewed as a book that is created over time through individuals telling stories of their experiences [4].

4ALL method was developed by reusing the positive aspects of an existing LL method. *4ALL* method is focused at attaining a balance between excellences and challenges and suggesting improvements while creating a better level of commitment. Thus, the refinement and development of an existing LL method has led to an alternative method which comprises of 5 steps that are dependent on a careful timing and an attentive moderating environment. A *4ALL* moderator is a person who coordinates the workshop activities attentively with a vivid knowledge of appreciative inquiry. When an agenda is set for a *4ALL* workshop, it is then followed with careful timing to accomplish the purpose of the workshop.

The purpose of the method is to enable a workshop participant to,

- 1) Reflect upon his/her project tasks and identify excellences and challenges so that, a balance between them can be attained
- 2) Share knowledge about his/her positive experiences, so that, the other workshop participants learn new lessons and tend to apply it in their future projects
- 3) Apply and spread the lessons learned, in future projects and to others

Overall, the method was aimed at dealing with the challenge that lessons learned activities are not prioritized as they aren't beneficial, thereby, enhancing organizational learning to a better level while making the learning process, a fun activity.

The goals of the method are presented below.

- 1) Improving lessons learned practices, so that, the lessons learned workshops are really useful for the organization and participants
- 2) Reducing the duration of the cycle of product development thereby shortening time to market
- 3) Generating the essential energy to implement the suggested improvements

The method enables the participants to engage in a collective thinking process to not only identify and analyze their positive and negative experiences but also to suggest concrete actions for improvements thereby enabling them to work with the improvements. The method comprises of five steps that are inspired by the principles of appreciative inquiry, as presented below.

Step1. Introduce 4ALL Method Basics and Recap Project - During this step, an agenda will be set for the workshop followed by a recap or reflection of the projects and a clear definition of the workshop focus. This step is in accordance with the constructionist principle of appreciative inquiry and the 'Definition' phase of the cycle appreciative inquiry process model.

Step2. Identify Excellences and Challenges - In this step, participants will present positive experiences i.e. *Excellences* on green post-it notes and negative experiences i.e. *Challenges* on red post-it notes. This procedure will offer each of the workshop participants, an opportunity to be heard of his/her experiences in a project. This is a realization of the 'Freedom to be Heard' offered by appreciative inquiry. The step is in accordance with the principle of simultaneity of appreciative inquiry and the 'Discovery' phase of the cycle appreciative inquiry process model.

Step3. Sort and Decide on Major Areas - In this step, participants will be asked to collectively sort all the green post-it notes and red post-it notes into areas, such as, 'Organization', 'Project Planning', 'Processes', 'Tools', 'Collaboration', 'Communication' and 'Resources'. This step which is in accordance with the poetic principle of appreciative inquiry will provide valuable support to the 'Dream' and 'Design' phases of the cycle appreciative inquiry process model. It ends with an individual voting process to agree on major areas for a more detailed analysis.

Step4. Analyze and Formulate Suggestions - In this step, participants will be divided into groups. Each group will then choose an area to analyze the cause and effect of the identified excellences and challenges within that area and to suggest improvements based on them. This step will ultimately offer 'Freedom to be Dream in Community' and, it is in accordance with the anticipatory principle of appreciative inquiry and, 'Dream' and 'Design' phases of the cycle appreciative inquiry process model.

Step5. Agree on Improvements and Conclude - In this step, all the groups will present their suggestions for improvements followed by their feedback on the improvements and their overall impression of the group presentations. This step is in accordance with the positive principle of appreciative inquiry. It ultimately offers 'Freedom to Act with Support' and 'Freedom to be Positive' to step into the 'Destiny/Delivery' phase of the cycle appreciative inquiry process model.

A 4ALL workshop will infuse positive energy in the participants to take action on the suggested improvements. This was acknowledged by the workshop participants and is presented in 'Case Study' section in the paper.

3.2 Research Methodology

The research reported in this paper builds on a qualitative, interpretive case study, a suitable strategy to research about an area (e.g. 4ALL method) in which a few studies have been

conducted in the past. “Qualitative research is an inquiry process of understanding which is based on distinct methodological traditions of inquiry that explore a social or human problem. The researcher builds a holistic picture, analyzes words, reports detailed views of informants, and conducts the study in a natural setting” [5]. So, the reason for choosing a qualitative approach is relevant to the research undertaken which is focused on solving the research questions and thereby aiding the diffusion of 4ALL method. Appreciative inquiry is inherently a qualitative approach to feedback elicitation focusing on successes and strengths. So, this ‘*Interpretive*’ research took a ‘*Qualitative Approach*’ with ‘*Case Study*’ as the research method.

Case study is a research strategy focused on understanding the dynamics present within single settings, to identify and explain relevant information about a specific area of interest [7]. Case study is said to be a preferred strategy when ‘How’ and ‘Why’ questions are the focus of the research [8]. In this case, the focus of the research lies in addressing the research questions, by explaining the fundamentals, goals and organizational benefits of the 4ALL method, and by identifying the various means of diffusion. In this research work, the researcher is directly involved in the process of data collection and analysis. The researcher also had the opportunity to interact with the people involved in the development of the 4ALL method and with those who participated in the workshops. It enabled to get a deep insight into the problem under study because, an interpretive explanation, documents the participant’s point of view and translates it into a form that is intelligible to the participants of a 4ALL workshop [6]. Indeed, this interpretive research made it possible to present the researcher’s own constructions as well as those of the participants of the workshops.

3.2.1 Data Collection Methods

The different data collection methods that were used during the research, include,

- a) Literature study
- b) Interviews and Document review

The realization that, data analysis is an ongoing process during a research which involves, organizing and preparing the data, analyzing the data in detail, continual reflection about the data, interpreting the data in the light of the personal lessons learned, comparing the findings with the relevant literature and theory, raising questions and/or advancing an agenda for the essential reforms, proved really useful for the research work.

Literature Study

A literature study has been carried out to obtain a theoretical background to the research and to position the research work, thereby serving as a foundation for the research. The literature search was performed primarily using web based academic search engines such as IEEE Xplore [9], Google Scholar [10] and the search function at the Software Engineering Institute [11]. The keywords used were, ‘Lesson Learned Workshops’, ‘Post Mortem Evaluation’, ‘Software Process Improvement’, ‘Appreciative Inquiry’, etc.

Interviews and Document review

The research study comprised of six interviews. The first two interviews were conducted with a process engineer and a change manager, who were also involved in the development of 4ALL method. The following two interviews were conducted with 4ALL workshop participants who serve as a line manager and a verification engineer. Later on, the last two interviews were conducted again with other 4ALL developers, who serve as collaborative researchers at Ericsson and IT University. All the 4ALL developers have been involved in researches on appreciative

inquiry, are experienced in lessons learned workshops. All the interviews were semi-structured interviews, as they can result in generating rich data that will enable to gain a better understanding and a deeper insight about the research undertaken [20]. All the interviews lasted within a range of 45mins to 90mins and resulted in two to five A4 papers of notes, each.

The researcher was able to access a document about 4ALL method and this document proved useful in acquiring the background knowledge about the method essential for the case study.

4 Case Study: Transition from Traditional Lessons Learned to 4ALL

In this section, the results from the qualitative interview study conducted are presented. Traditional LL workshops followed by a transition process and then by the introduction of 4ALL are presented as follows.

4.1 Traditional LL workshops at Ericsson

The telecom company, as stated earlier, has a tradition of conducting LL workshops at the end of every project. But the workshops will not be always conducted as actual workshops but rather as short lesson learned activities in the final project meetings. Many of the workshops are unstructured and conducted using undocumented methods while some of them are conducted in a better structured way. When a workshop is conducted in an unstructured way without following a suitable method, it ultimately resulted in a list of many problems, may be not all of the really important problems and a few strengths. So, the workshops resulted in a long list of problems or failures without a balance with successes. The workshops were mainly focused on the problems that are related to tools, processes, budget, product decisions and relevant external factors. The workshops were conducted with a focus on trying to find the problems or external factors that are beyond the control of the project members. The external factors, such as, requirements specification was delayed, a customer did not approve the requirements specification at the right time of the project and product management did not present the forecast for a base station, were mainly presented as the lessons learned from the workshops. Many failures and a few successes were simply identified and stated as the lessons learned from a project in the final project report, without understanding the need for attaining a balance between them, and suggesting improvements. The workshop participants presented the barriers faced during the projects in yellow post-it notes based on individual importance levels and were not actively involved in a process which is designed to discuss the identified barriers by suggesting improvements and agreeing on them. So, the participants were not involved in the process of taking any concrete action to deal with the identified problems, as expressed below.

“When using unstructured and undocumented methods, people assembled in a room and presented some problems in yellow post-it notes and eventually did nothing. If they do lessons learned in a more structured way, they work with the findings, try to sort and prioritize them, and suggest what can be done actually.” – Process engineer

The organization could not take any action on the lessons learned presented in the final project report as it was presented in a disingenuous way highlighting only the subjective opinions and experiences of certain individuals, so that, they are insulated from bad consequences. So, the opinions and experiences cannot be and were not considered as lessons learned that will be applied in future projects. The lack of emphasis on or lack of commitment to the workshops also affected the process of learning lessons. Further, project members (For e.g. System designers,

Software and Hardware designers) involved in a development project were/are assigned to other projects, before the workshops were/are conducted for the project. So, when they participated in workshops after, say, 6 to 18 months of completing their project tasks, they focused more on the problems faced during the project probably attributing them to the external factors, stated earlier and as expressed below.

“It’s been a long time, of course, can be 3 months but can also be 12 or 18 months ... What do you remember after 3 months? Probably, we tend to remember what wasn’t working, because we don’t celebrate what was good. So, we don’t remember it that well. This is a tradition where you look backwards and you don’t try to find the good things but try to find the problems and try to map them with the external factors that are beyond your control.” – Process engineer

The workshops were not considered to be interesting and fun to be a part of, because either the project members left the project a long time back or the workshops have a problem oriented focus. So the workshop participants instead of feeling proud for their achievements, small or big in their projects, felt depressed being influenced strongly by the focus on negative experiences. When the workshop participants learn lessons, they learnt it only from the problems that can be easily dealt with, without taking into consideration all of the really important problems. This resulted in an environment characterized by a feeling that the line organization did not focus on to deal with the lessons learned from the workshops. Therefore, many of the workshops were conducted with all the ingredients that resulted in a situation wherein the workshops failed to contribute to the process of individual and team learning, organizational learning and operational excellence. This resulted in low prioritization to conduct the workshops and, low participation, if conducted at the end of the projects. Therefore, the traditional workshops can be summed up by the following expression.

“Nothing is done about anything. You blame others for problems ... So, the workshops result in a ‘They’.” – Process Engineer

4.2 Transition Process

Traditional LL workshops, as can be seen from the earlier part of the paper, were conducted in a way which did not contribute sufficiently to the organizational benefits they need to. So the process of transition from a traditional way to an appreciative inquiry way of conducting the workshops was initiated by a group of five members, comprising of, a process engineer and a change manager, and, the three collaborative researchers.

An existing approach for conducting LL workshops was taken as a foundation for the alternative 4ALL method, with the aim to improve the process of learning lessons through workshops. The opportunity to introduce strength based elements in the existing approach was taken into consideration and the approach was refined based on the principles of appreciative inquiry with a focus of not only addressing challenges but also providing a room for identifying and appreciating strengths, and suggesting improvements based on the strengths as well as addressing the barriers for conducting the workshops. The term ‘Failures’ or ‘Problems’ or ‘Negative Experiences’ was replaced by ‘Challenges’ aimed at changing the mind set of the workshop participants, so that, they can face them as challenges in their future projects and tend to overcome them. Thus the existing approach was refined and developed in an alternative way, an inspiration of appreciative inquiry, so that, the organizational benefits of the LL workshops are realized. 4ALL method seems to have changed the perception about the workshops, as presented in the following part of the paper.

4.3 Introduction of 4ALL at Ericsson

4ALL method, an appreciative inquiry way of conducting the LL workshops, has so far been applied in four workshops. It has resulted in enhancing the lessons learned practices in the organization by being able to strike a balance between excellences and challenges.

In a large organization, any development project may face a variety of problems, including, problems caused by external factors that are beyond the control of the project teams, as presented earlier in the paper. However, LL workshops conducted with a major focus on problems aimed at learning lessons from them, will eventually result in unwillingness and less interest being shown by the workshop participants towards the workshops. Nowadays, a different environment is experienced after the introduction and application of 4ALL method, a structured and a well documented method of conducting the workshops. The opinion about 4ALL workshops is that they are really useful as they provide a participant to learn new lessons in terms of both positive and negative experiences that are shared by other participants as examples of excellences and challenges. The positive spirit gained from the workshops together with the understanding that all projects may run into problems and all problems cannot be fixed, have resulted in a situation wherein the workshop participants feel better involved, motivated and express a readiness to face the challenges and probably deal with them, as expressed below.

“We felt that, WOW! We are really good in developing the functionality of a software product. We often forget that, as we only focus on what we are not doing well. But by doing this, lot of green post-it notes came up and created a positive energy. Things taken for granted and you forget were brought up. It gave a good feeling and a lot of energy to take to the next project. We were motivated and mentally strong to deal with the challenges as we get an opportunity to focus on the positive things and on improving them in a group, the group will feel better and improve...” – Verification Engineer

“I have never left a 4ALL workshop as we felt that it was worthwhile spending time to learn lessons. I can learn and take something and apply it directly in my next day’s work.” – Process Engineer

“It was a positive experience and I believe that you get good feedback, feedback that you can work with. Often, when we try to recall what has happened we often think of the bad things that happened, that is the traditional way ... often it ends up in negative criticism. There’s a feeling that, Oh, we should have done that better and everyone leave the meeting with a feeling that we didn’t do very well ...” – Line Manager

The participants felt that it is really interesting and fun to face and overcome challenges, if there are not too many of them. They have realized the need to focus on attaining a balance between excellences and challenges by understanding that the time spent on fixing challenges can be better focused on improving their positive experiences or strengths to a better excellence level. This is also attributed to the reason that many of the identified challenges are related to situations in projects when compared to many of the excellences. So, the participants felt that excellences are valuable to compensate for certain challenges as it is unworthy to focus on fixing them when it is rather efficient to focus on improving excellences, particularly during a flexible development process, as expressed below.

“I have seen that a balance of excellences and challenges will help to deal with the challenges better... When a challenge and an excellence are opposite to each other, it is efficient to improve the excellence and the drawbacks of the challenges will then be dealt with...” – Line Manager

“Challenges are manageable if they are not too many and we don’t run into them too often.” – Process Engineer

The participants expressed that, in a long run, valuable project time saved as a result of improving their strengths to a better excellence level, will enable them to deal with, may not be all, but at least some of the challenges, including, those caused by delay in requirements specification, expressed as follows.

“It might be easier to take something that is good today and to make it really excellent than focusing on problems to make them decent.” – Line Manager

“Very often only focusing on lessons learned is problematic and when you are not doing anything with the problem areas, you tend to run into the same problem ... Some good things are very easy to implement ... It’s easier to copy a good thing in the next project than to fix a problem identified in the previous project while working in a new project because fixing a problem means lot more work and you have to do some changes to fix ...” – Process engineer

Therefore, the workshops have enabled the participants to understand the need to focus on their excellences while simultaneously viewing problems or failures as challenges to be faced and overcome in their future projects. The participants further expressed that 4ALL workshop participation has resulted in making them feel mentally strong as they had a positive feeling about their projects, realized by the focus on attaining a balance between excellences and challenges during the workshops. The workshops have given them an opportunity to celebrate their successes, they do not recognize as they keep moving on. So, they expressed a feeling of pride and joy about themselves and their strengths, ways of working and successes. The workshops are also considered to be fun as there is a focus on not only challenges and excellences but also suggestions for improvements followed by a feedback on them. They have been able to frequently apply the lessons learned from the workshops, in terms of suggestions for improvements in their projects, pointed out as below.

“My experience is all that after the workshop you have a more positive feeling about the project completed as you not only focus on problems but also on positive things, really good things and strengths that you could bring with you in the next project. If we hadn’t brought out our strengths in the workshops, I don’t think we would have used them in our next projects ... by bringing these positive things back, suggesting improvements and getting feedback, we took them in our next projects.” – Line Manager

“We felt good as we felt that we have done really good things in the project. It is a constructive way of dealing with problems and it resulted in new ideas to deal with the problems. Nice atmosphere, everyone was boosting with energy and proud.” – Process Engineer

“We have really found the workshops to be fun and I got some good feedback from others, I haven’t heard of earlier. I felt good about it. We became proud of our processes, our way of working and knowledge. It gave a better feeling for the people and that helped to work better in the next projects.” – Verification Engineer

They also shared that the structured way of learning lessons is quicker as it is focused, thereby appreciating that the method suits the time constraints in the organization. They expressed that this approach will eventually support their efforts aimed at meeting targets and attaining operational excellence in the organization and that their commitment towards success has reached better levels. The participants also acknowledged the role of a 4ALL moderator, as it was realized

during the workshops that a moderator who can steer and coordinate the workshops can better maintain the focus throughout, especially during the final phases of the workshops.

Excellences and relevant suggested improvements rather than a list of challenges are found to be easily communicated to the organization and line managers, as they will be interested in them and therefore suggest reusing the excellences and implementing the improvements.

Therefore, a 4ALL workshop can be summed up by the following expression.

“There is something for everyone to make them attend and attend again. People will realize their potential and the workshops conclude with a feeling of ‘We!’” – Process Engineer

5 Discussion

On the basis of the results of the case study, it is evident that 4ALL method has succeeded in introducing a strength based focus in the LL workshops.

The method has resulted in the realization of the organizational benefits of LL workshops by improving the lessons learned practices. The organization can now translate and transfer the unconscious and often intuitive skills of its productive employees into a conscious, manageable form to others in the organization, thereby accelerating the learning process [14]. 4ALL workshops have enabled the participants to actually refresh their strengths and challenges in their projects and, spread their knowledge to others and, apply them in their own project tasks in a consistent and, may be, in a better way. Therefore, this has resulted in the view that a 4ALL workshop is a real lessons learned activity.

The workshops have enabled the sharing and improving of not only the positive experiences, but negative experiences, as well. There is also a room for a constructive feedback followed by an agreement on the improvement suggestions. This potential of the workshops truly derived from the principles of appreciative inquiry and unleashed by its six freedoms have facilitated the diffusion of strengths from a project to another project, with continuous improvements. This has eventually resulted in a positive spiral of excellences and challenges that are improved and being continuously improved all along the way. Such a process of learning lessons, termed as an ‘Experienced Transfer of Lessons Learned’, is now being gradually realized at the telecom company.

Positive experiences of a person or a project team involved in a development project might not spread to others who were not involved in the project. But, simply because 4ALL is a documented method, a presentation of the lessons learned in terms of suggested improvements to a smaller or larger group of individuals, which have not participated in the workshops, can eventually spread them. Such groups will be encouraged to try and apply the improvements from the presentation, may be with a better adaptation. Individuals can reuse their strengths or improve their strengths to better excellence levels in a short duration, eventually reducing the duration of the cycle of product development, thereby shortening the time to market.

The workshop participants have realized that the workshops are really useful and fun and are sources of motivation and mental strength. In addition, participants have understood that, it is much easier and more efficient to improve strengths than to improve challenges and the time saved by improving the strengths can be efficiently applied to deal with the challenges. This has resulted in improved individual and team performances associated with better levels of organizational commitment. The workshops have given them an opportunity to feel proud, to learn lessons from others in terms of improvements, to understand the need for attaining a

balance between excellences, to individually identify and explain excellences and challenges, to engage in focused discussions, to involve in a structured process, to analyze the cause and effect of the identified excellences and challenges, to suggest improvements and get feedback on them and to constructively reflect on their previous project tasks. Such advantages of a *4ALL* workshop not found in traditional LL workshops have resulted in barriers for conducting them. This shows that *4ALL* method has addressed the barriers identified for conducting the LL workshops. So, the level of interest, willingness and participation exhibited by the participants towards LL workshops will increase to a better level.

All the factors discussed so far, have collectively resulted in a view that, *4ALL* workshops are tools of operational excellence and organizational learning. However, individuals who prefer problem solving and hence, get satisfied with problem oriented approaches may impede the application of *4ALL* method [16]. SPI theory also reveals that new initiatives taken and not properly deployed will result in an assimilation gap [17]. So now, the question of further diffusing *4ALL* method has given rise to the search for possible and efficient means of diffusion to realize the organizational benefits of the method.

4ALL method has the potential of a natural diffusion i.e. from a person to another due to the simple fact that people have enjoyed the workshops and have seen the potential benefits of it. The researcher may be involved in the production of a *4ALL Handbook* as a future project, primarily aimed at facilitating the diffusion of the *4ALL* method. The method is an alternative method introduced at Ericsson and this means that, there is a need for a reference material in the form of a handbook. The handbook will serve as a tool to address problems caused by the lack of such a manual, that can be easily consulted and provide quick answers for the questions that may arise about the method. Therefore, it can be used as a hands-on support by the workshop participants and will be useful to any organization which is planning to apply the *4ALL* method.

6 Conclusion

In this research paper, the researcher set out to investigate the organizational benefits of the strength based method and to identify the various means of diffusion of the method at Ericsson. The researcher involved in a detailed literature review, six interviews, many discussions and data analysis followed by an interpretative explanation of the empirical research data collected during the research. This research work has found that the alternative method for traditional LL workshops i.e. *4ALL* has addressed the barriers for conducting the workshops. The traditional LL workshops with a problem oriented focus failed to support the process of individual and team learning, thereby organizational learning and operational excellence. On the other hand, *4ALL* workshops with a strength based focus steered by the principles of appreciative inquiry have become tools of organizational learning and operational excellence. The barriers that hindered the realization of the organizational benefits of the workshops will cease to exist and organizational benefits associated with the application of *4ALL* as experienced by the workshop participants include,

- ◆ Motivation and Organizational Commitment - A positive energy infused in *4ALL* workshop participants has motivated them to constructively deal with challenges. This has enhanced the levels of commitment towards the success of projects.

- ◆ Knowledge Management and Organizational Learning - *4ALL* workshops have given the opportunity for a participant to learn new lessons from other participants. Since, the workshop outcomes are documented, people who cannot make it to the workshops can also learn them, leading to the realization of an 'Experienced Transfer of Lessons Learned'. Therefore, the

workshops have paved the way for an effective knowledge sharing, knowledge management and organizational learning.

◆ Individual, Team Performances and Operational Excellence - *4ALL* workshops have made individuals and teams realize the need to improve their strengths, thereby enabling them to face challenges. This will gradually improve their performances, ultimately resulting in operational excellence in the organization.

However, such organizational benefits are yet to be fully realized as *4ALL* is yet to be diffused throughout in the organization. So, efforts to facilitate the diffusion process, including, frequent and large group *4ALL* workshops and production of a *4ALL Handbook* by the researcher are undertaken. Individuals, for their part, need to start thinking out of the box i.e. avoid a problem oriented focus and start to view everything in a constructive way to realize their own potential and the potential of *4ALL*. The organization can also support the diffusion of *4ALL* by allocating essential resources and by commitment.

The overall attitude towards the introduction and application of *4ALL* method is that of enthusiasm as the method has resulted in a feeling of pride and joy. On a final note, considering the organizational benefits of the strength based method, any organization can apply the method to realize the potential of the LL workshops.

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